Preventing children drowning

SIR,—Three summers ago our 2 year old son wandered from our garden. He was found in the swimming pool of a neighbouring garden: the pool was unfenced and had a non-weight bearing cover. Resuscitation was not successful. We know of three families within 16 km who have suffered similar tragedies: as Alison Kemp and J R Sibert point out, drowning is a common cause of accidental death in children.¹

In our society, where there is increased emphasis on out of doors activities, the incidence of drowning in children will surely increase unless effective preventive measures are taken. We have written on this matter to our member of parliament without success. We support Kemp and Sibert's recommendations that domestic pools should have toddler proof fences with self locking doors and covers that can bear the weight of a child. People may argue that this interferes with personal liberty: the same was said about seat belt legislation. The children whose lives are at risk are too young to appreciate such abstract arguments.

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He made a good recovery, with no evidence of cognitive impairment, and was later transferred to the local psychiatric unit for further assessment.

Our patient suffered relatively mild carbon monoxide poisoning despite spending five hours inhaling exhaust fumes. Previous reports indicate that when people use ordinary vehicles and a similar method to that reported here death may be expected within 20-30 minutes of them starting to inhale fumes.² At that stage carboxyhaemoglobin concentrations would be above 50-60%. We speculate that this suicide failed because the car was fitted with a catalytic converter. To our knowledge, this is the first such report in the United Kingdom.

Introducing controls on exhaust emissions may have a beneficial effect on suicide rates.

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Suicides in prison

SIR,—Keith Hawton did not mention the relevance of suicide in prison in his editorial on suicide among men.¹ The rate of suicide in prison far outstripped the rate in the rest of the population during the 1980s;² therefore it is fair to surmise that suicides in prison have contributed considerably to the national statistics. Suicide in prison is a well established problem, and even in 1913 the suicide rate of prisoners was three times that of the general population.³ Although car exhaust poisoning is the method of suicide used most commonly by men aged 15-44,¹ hanging seems to be the commonest method in prison.

Preventing suicide in prisons or in the community is not primarily a medical matter; nevertheless, different methods of screening all new prisoners—for example, initially by trained psychiatric nurses—and, as recommended,⁴ contracting in specialist mental health care services may considerably reduce the rate of unnatural deaths in prison.

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New study of suicides needed

SIR,—Keith Hawton's proposal for a fresh inquiry into the clinical and social features of suicide based on the "psychological necropsy" approach deserves serious consideration.¹

According to the citation index, studies that describe clinical aspects of a consecutive series of suicides are often referred to, indicating a continuing need for facts on the symptoms and signs of mental disorder in suicide. But the three studies most often referred to are over 25 years old,^{2,3} and there are grounds for believing that different findings might emerge today. These grounds include a changed composition of the population, increased suicide rates among the young, improvements in the treatment of mental disorder, changes in coroners' practice, improved methods of classifying mental illness, and a greater tolerance of suicide.

Changes in ethical standards intended to protect supposed vulnerable relatives being interviewed might, however, prevent a complete consecutive series being collected.

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Treating elderly patients with breast cancer

SIR,—Although elderly patients with cancer have special needs, it does not follow that optimal treatment should necessarily be withheld. Indeed, whom do we define as elderly? J Michael Dixon cites the age of 70 as the arbitrary cut off point.¹ In our opinion, specific age is not the main issue. More important criteria are how active the patient is, concomitant medical conditions, and the patient's choice of treatment. Patients' preferences may include perceptions of the relative value of quantity versus quality of life.

Treatment options should be explicitly formulated for individual patients. Some patients may prefer a modified radical mastectomy without the need for postoperative radiotherapy in most cases, whereas others may wish to be managed with a local excision followed by adjuvant radiotherapy. Axillary dissection could be optional, but it is crucial to explain that this would determine whether long term tamoxifen should be given. If axillary dissection is declined, however, it is reasonable to offer irradiation of the axilla to potentiate local control.

In our experience, radiotherapy is well tolerated by elderly patients. As long term cosmesis is unlikely to be of overwhelming importance

Suicide and vehicle exhaust emissions

SIR,—In his editorial Keith Hawton comments that car exhaust poisoning is the method of suicide most commonly used by young men and suggests that one possible strategy to reduce this would be to alter the design of car exhausts so that it is harder to attach tubing.¹ We suggest that introducing controls on exhaust emissions may also be of benefit.

The introduction of federal standards for car exhaust emissions in the United States in 1968 led to a reduction in deaths from exhaust poisonings that was not seen in the United Kingdom, where no similar controls were imposed.² Controls on the levels of various pollutants, including carbon monoxide, in exhaust fumes, have been included in the MOT test since 1 January this year. This is in accordance with a European Community directive on standards for emissions, which will come into force on 31 December this year. The exact standard required depends on the age of the car.³ Levels of pollutants can be reduced by manufacturers in various ways, including by fitting a catalytic converter, which reduces pollutants such as carbon monoxide by 80-90%.⁴

A 43 year old man was admitted to hospital after a serious suicide attempt: he had connected a hosepipe to the exhaust of his car and led it into the car through a small opening in one of the windows. The engine of the car (a Saab fitted with a catalytic converter) had been running for about five hours when he was discovered by police; he was semi-conscious.

On arrival at hospital he was found to have a carboxyhaemoglobin concentration of 21%.

hypofractionated radiotherapy may be offered, providing equivalent local control with acceptable late effects. Compared with more protracted regimens, the fewer hospital attendances required not only are cost effective but may be more psychologically acceptable for elderly patients. A single hospital visit once a week for six weeks (3900 cGy in six fractions over six weeks) may be more acceptable than daily treatments for six weeks (6000 cGy in 30 fractions over six weeks). Further studies should address the issue of acceptability to patients in this regard.

In contrast to Dixon, we believe that tamoxifen should not be given routinely to the elderly population unless there are specific indications such as involved axillary nodes or metastases. Although the trial of the Novadex Adjuvant Trial Organisation and the meta-analysis by the Early Breast Cancer Trialists' Collaborative Group suggest an overall benefit, the probability of benefit to a given patient may depend more on specific prognostic factors. Determinants that may preclude the routine administration of tamoxifen include practical issues such as compliance, potential interactions with other drugs, cost, and potential side effects such as nausea, flushing, and increased risk of thromboembolism and endometrial carcinoma. The potential advantages and disadvantages should be discussed with the patient non-dogmatically.

For locally inoperable disease combined radiotherapy and tamoxifen may be appropriate if oestrogen receptor concentrations are raised, but age should not automatically contraindicate chemotherapy in elderly patients. Judicious appraisal of a patient's medical status and biological age with appropriately tailored treatment is essential.

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SIR,—J Michael Dixon suggests that tamoxifen alone is satisfactory treatment for patients unfit for a general anaesthetic whose tumours test positive for oestrogen receptors.¹ We question the use of oestrogen receptor immunocytochemical assay alone in selecting such patients for conservative management with tamoxifen as studies so far have recruited small numbers of patients with limited follow up (S C Low *et al*, 43rd scientific meeting of British Association of Surgical Oncology, December 1991).^{2,3} Additionally, this assay is expensive⁴ and not easy to perfect on fine needle aspirates, particularly if used only occasionally.⁵

Dixon does not mention the value of differentiating the grade of tumour as a prognostic indicator and method of selecting such patients for endocrine treatment, perhaps because grade cannot generally be determined from fine needle aspirates. Prospective multivariate analysis, however, has confirmed the grade of tumour as being one of the most important prognostic factors in operable disease in patients aged under 70,^{6,7} and Robertson *et al* found that this was a significant factor that affected both the disease free interval and overall survival in elderly patients.⁸ They found that 65% of patients initially treated with tamoxifen, and 42% of those initially treated with wedge mastectomy, who had progression of disease had grade 3 tumours; they noted that more grade 3 tumours than grade 1 and grade 2 tumours seemed to progress during tamoxifen treatment.

Thus in elderly patients the grade of the tumour will probably provide a reasonably accurate prediction of response to endocrine treatment,⁴ in addition to prognostic information. A biopsy under local anaesthesia may be used to provide

samples, ensuring that there is adequate material for assessment of histological grade; this could be regarded as a reasonable and practical alternative to oestrogen receptor immunocytochemical assay on fine needle aspirates.

If further data on predicted response are required, especially for the moderately differentiated group of tumours, we have found that pS2 status may be valuable. This can be determined in formalin fixed, paraffin embedded tissue with a relatively simple immunohistochemical technique. Studies have shown good correlation with response to endocrine treatment (K A Dookeran *et al*, 43rd scientific meeting of British Association of Surgical Oncology, Dec 1991),^{9,10} and pS2 may be particularly useful when data on oestrogen receptor status are unavailable (K A Dookeran *et al*, 43rd scientific meeting of British Association of Surgical Oncology, Dec 1991; R A Walker *et al*, winter meeting of Royal College of Pathologists, Jan 1992).

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SIR,—J Michael Dixon is right to encourage efforts to obtain local control of operable breast cancer in elderly patients by judicious use of surgery and radiotherapy and to discourage therapeutic nihilism.¹ In practice, however, operable breast cancer is less common among elderly patients than among the young. In a series of 1141 patients with breast cancer Stoll and Ackland found 35% over the age of 70 with locally advanced disease compared with 20% aged 50-59 and 14% aged 40-49.² Thus for many patients quality rather than length of survival is the more important variable. Prospective studies of the treatment of breast cancer in elderly patients need to include some form of assessment of quality of life.

Younger patients may understand and cope well with the emotional and physical demands of surgery and complex, time consuming radical radiotherapy. Although there is no evidence that elderly patients' tolerance of radical radiotherapy is any less than that of young patients,³ various emotional and physical factors often conspire to diminish the quality of life of elderly patients with breast cancer. Fears of cancer (based on an era when the disease was rarely curable), death, hospitals, tests, and treatment⁴ may be aggravated by the physical handicaps of impaired vision, hearing, memory, and mobility. This may be exacerbated by long waits for ambulances for daily

attendances at a radiotherapy department or disorientation from admission to an unfamiliar hospital environment. For such patients hormonal treatment, simple and short palliative local radiotherapy to control breast discharge or bleeding, and single fractions to relieve pain from bone metastases⁵ are most likely to maintain a reasonable quality of life.

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Aggressiveness of breast cancers detected by screening

SIR,—P J Klemi and colleagues' finding that breast cancers detected by screening are less aggressive than control cancers should be interpreted cautiously.¹ Firstly, the design and reporting of the study make it possible to compare percentages of tumours of advanced stage, for example, but not to compare the corresponding incidences of tumour, which are more important as markers of future mortality.²

Secondly, restricting the cases to those detected in the first round of screening renders the results a foregone conclusion: it has long been known that screening detects cancers with "length bias," which are slower growing and less aggressive than clinically diagnosed cancers, but most of these cancers are detected in the first round of screening.^{3,4} The restriction to the first round is probably also responsible for the observation that variables of malignant potential were lower in the tumours detected by screening after adjustment for size. After excluding tumours detected in the first round colleagues and I found that tumours detected by screening were better differentiated than control tumours (presumably because of the malignant progression referred to by Klemi and colleagues¹) but that the distributions of differentiation grades in the two groups were almost identical after adjustment for size.⁴

Workers in other screening programmes should not be unduly alarmed at finding substantial numbers of tumours of lower malignant potential at the first round but should try to improve early detection of fast growing tumours if the phenomenon continues to be observed at later screens. Klemi and colleagues' results are consistent with those of some other studies^{5,6} in seeming to advance the time of diagnosis while failing to reduce mortality. They do not explain why these studies do not reduce mortality while others do.^{2,7}

It seems clear that if screening is to reduce mortality from breast cancer it has to detect aggressive, poorly differentiated cancers early.^{1,8} Indeed, the proportion of poorly differentiated tumours in a screened population should be similar for a given size to that expected in the absence of screening.⁸ Klemi and colleagues' paper shows that this was not the case at the first screen,¹ but knowing whether it was achieved at subsequent screens would be more helpful.

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